~~SECRET~~ ~~CONFIDENTIAL~~

MP-144 Part I

DRAFT -- 17 October 1956

TO: GMIC Ad Hoc Subcommittee on Exchange of Guided Missile Delegations between the US and the USSR

SUBJECT: ORR/CIA Contribution to GMIC Subcommittee Report on Net US Intelligence Gain Derived from US-USSR Missile Delegation Exchanges.

NET US GAIN IN INTELLIGENCE RELATED TO MISSILE PRODUCTION

1. Status of US Intelligence on this Subject

US intelligence currently considers two plants as producing surface-to-air guided missiles. These are at Istra and Stepanova. No other Soviet facilities are definitely identified in the production of guided missiles.

The following production facilities are currently identified or associated with the Soviet guided missile program.

Facility		
U/I Assembly Plant	Istra	Fabrication and/or assembly of surface-to-air missiles
U/I Assembly Plant	Stepanova	Probable fabrication and/or assembly of surface-to-air missiles
Plant and NII #88	Kaliningrad	Probably engaged in surface-to-surface and possibly surface-to-air missile production and development
Plant #393	Krasnogorsk	Possibly associated with missile guidance including infra-red
NII #885	Moscow	Probably associated with missile guidance and control
Plant #456	Khimki	Probably engaged in production and/or development of missile propulsion units
Design Bureau #2	Moscow	Possibly associated with air-to-surface or surface-to-air missile guidance and control
Plant #304	Kuntsevo	Possibly associated with missile ground guidance

~~CONFIDENTIAL~~ ~~SECRET~~

The existence of operational guided missile plants at Istra and Stepanova was unknown to the intelligence community until 1955 and 1956 respectively. It is therefore probable that there are a number of unknown missile facilities in the USSR.

2. Specific Fields of US Intelligence Gain

US intelligence would gain in at least 7 specific areas by the exchange of a properly briefed missile delegation.

a. Estimate of production

(a) current rate
(b) cumulative (from serial numbers)

b. Indications of new or heretofore unknown facilities in the Soviet missile program.

c. Corroboration of suspect facilities in the Soviet missile program.

d. Indications of the extent of integration or subcontracting in the Soviet missile programs.

e. Production capabilities of missile plants including: the extent of capital or labor intensity and an evaluation of Soviet tooling.

f. Various pieces of operational intelligence information such as service or ministerial subordination of the facility, transportation services and units, Soviet emphasis on construction pecularities for missile facilities, addresses and key industrial personalities.

g. Indication of necessary back-up facilities which might later become feasible intelligence targets.

These particular gains would contribute to fulfilling a First Priority of the National Intelligence Objectives: the ability of the USSR to develop and employ all types of guided missiles against the

United States, its key overseas installations, and its operating military forces.

The almost complete absence of information on production facilities and capability associated with the Soviet missile program itself makes points a, b, and c highly important gains for US intelligence. But this would be only the beginning. With known industrial missile facilities, various intelligence collection components (the attache system as a most overt example) can give us vitally important support information with which to maintain continuing production estimates. In addition, these gains will establish a frame of reference in which to reevaluate and exploit existing information associated with the Soviet missile program.

Knowledge of the extent of integration in the Soviet missile program (point d above) will allow intelligence components to focus collection efforts on key facilities in the production sequence.

The extent of capital or labor intensity (point e) will increase the reliability of production estimates based on the number of plant employees, and might give us some indications of the complexity and precision of Soviet missile systems.

The operational intelligence information (point f) consists of various items which when used in conjunction with current intelligence on the Soviet missile program will definitely aid in establishing production and economic estimates of that program.

3. Means of Obtaining the Information on an Exchange Visit

Primarily the information desired will be obtained by access to installations unknown or unaccessable to other US observers. Even the most superficial tour of a production facility by personnel trained in that line of work will greatly extend the quality of the information. Because of his professional approach, a properly chosen missile delegate (see Section 7) will naturally concentrate on items of information significant to production estimates.

Secondly, exchange visits are in essence continuing meetings of specialists from both nations. Such contacts, if properly used, can produce voluntary or inadvertant disclosure of information of a very valuable nature. This sort of contact is particularly valuable for indications of production bottlenecks, rates of production, lead time, and the possible introduction of new models as well as information on statistical methods, cost data, funding and planning of the Soviet missile programs. Aside from such direct information, personal contacts are most liable to divulge fringe information such as the names of leading missile personalities, ministerial subordinations, and key areas of missile-related research and other missile activity. These meetings will give new information and also contain a means of evaluating the completeness or the superficiality of the missile exchange itinerary.

Thirdly, a properly balanced missile exchange delegation will include missile production specialists. This would be the first time that any phase of the Soviet missile program had been subject to surveillance by missile experts. The exchange process allows such

specialists to enter the Soviet Union under conditions more highly favorable than those given the general itinerant. Moreover, this extended immunity is granted to specialists who for US security reasons would not normally be allowed to visit the USSR.

25X1X4

[redacted]

4. Potential Soviet Gain on US Production Capacity

Except for a proper evaluation of the priority given to various missile projects in the United States, the USSR has at its disposal from open sources valuable information on all of the specific fields of US intelligence gains listed in Section 2.

Practically all of the facilities involved in the US missile program and much of the production information within these plants is obtainable in open literature. A good deal of scheduling and cost information on missile facilities can be derived from local press coverage, public announcements by the military services, and by contract and development status reports in Aviation and Missile periodical publications in the US. Further information of the type indicated in Section 2 is available to the Soviets by overt and covert observation of these announced US facilities. By

intermittent or continual surveillance of these facilities, Soviet personnel can report sources and quantity of supplies, number of workers, number of out-shipments, size and layout of facilities and production shifts. All this is currently available to the USSR. An evaluation of Soviet gain must begin by accepting their already extensive intelligence on US missile production capacity.

An estimate of the Soviet gain from exchange visits to US missile production facilities should include both the intelligence and technological aspects of this gain.

The intelligence gain to the Soviet Union can be evaluated in two ways: 1) new information and 2) confirmation. New information would most probably accrue from voluntary or inadvertant disclosure of information by American participants in the exchange delegation itinerary. Such information would include production bottlenecks, statistical methods, information on new programs, planned areas of concentration, objective evaluation of weapon systems (as opposed to service announced evaluation), and indications of missile systems most likely to be accepted for stockpiling. Confirmation would accrue to the Soviets by internal observations of plant production lines and methods which would serve to confirm Soviet estimates of US production already available from overt sources and external observation. This information would also confirm the fact that US open literature is indeed open, that the Soviets can rely on US publications and press releases.

The technological gain to the Soviets would accrue from observation and appraisal of US tooling and capital intensive techniques, precision production operations, the use of printed circuitry, and US reliance on subminiature electronic devices and precision mechanisms. These are the particular fields of industrial arts in which the Soviets are currently estimated to be at a disadvantage in relation to the West. Firm indications of success or failure of advanced techniques when used by US producers in missile fabrication would be a considerable technological gain to the Soviet Union.

It is concluded that in a missile exchange involving visits to production facilities, the intelligence gain to the USSR would be much less than the technological gain.

5. Statement of Net US Gain

An evaluation of the NET US Gain must be made on a comparison of US intelligence gain and Soviet technological gain.

The main advantage accruing to the Soviets will be an appreciation of the extent to which modern production techniques are applicable to missile production. The USSR has long discussed the advantages of expanded mechanization and "automation" within its industry. The implementation of such a change is certainly desired by the current Soviet leaders. A proper appraisal of the success or failure of various techniques when applied to missile production is very liable to facilitate the more rapid introduction of such techniques into the Soviet missile production program.

This gain to the Soviets is significantly offset by the vast intelligence gain that would accrue to the US in a missile exchange which includes production facilities on the itinerary. The Soviet gain would aid the USSR to produce missiles more quickly, perhaps with more reliability and accuracy. The US gain would give the intelligence community, for the first time, firm indications of the extent of the Soviet missile production program and the productivity of its facilities. This information will establish the basis for a continuing intelligence effort on the Soviet missile program. This we do not have. Without this, any estimate of Soviet missile production lies shrouded in the mists of mythology.

6. Specific Location of Installations for a Proposed Itinerary

The dearth of US intelligence on Soviet missile production facilities prevents the listing of specific locations with more than a modicum of confidence. Section 1 gives the plants which should be the basis of an itinerary selection. However, it should be noted again that there are reasonable indications that Soviet missile production is centered in plants entirely unknown to the US intelligence community. For this reason, and for the obvious one that a list may indicate the US lack of information on the Soviet program, no list of facilities should be forwarded to the USSR in the exchange negotiations. The US should accept or reject a Soviet itinerary on the basis of the list of suspect facilities in Section 1 and in recognition of the fact that there are probably several unidentified production facilities in the Soviet missile program.

7. Possible US Personnel to be on the List of Visitors

The gains to US intelligence which are listed in Section 2 will vary directly in accordance with the quality and background of the US visiting personnel. A real effort must be made to obtain missile industrial representatives who will appraise Soviet industry with both professional competence and an inquisitive mind. [redacted] 25X1X41

25X1X4A

[redacted]

The following management positions indicate the types of personnel desirable.

a) Production engineer

b) Chief of industrial engineering

c) Methods engineer

A representative from any type of missile plant will be satisfactory. However, a delegation with an industrial representative from plants producing all four types of missiles is considered highly desirable.

8. Types of Documentary Material which Might be Obtained on the Trip or as a pre-condition of the Trip

a. Map of USSR showing all primary missile production facilities. Similar information on the US facilities is available to the Soviets from US open sources.

b. Other plant documents of Soviet facilities such as:

Plant layouts
Inputs
Costs
Manpower-tooling ratio
Production scheduling

Documents or items such as the above are probably available within the various Soviet plants and at a ministerial level. They are probably classified and would only be obtainable on a reciprocity basis.

9. Special Conditions Other Than Reciprocity Required to Accept an Exchange Visit on this Subject

The gaps in US knowledge on production facilities are such that every attempt should be made to include them on an itinerary. If the USSR refuses to include production facilities on the itinerary, the net gain to the US of a guided missile exchange suffers considerably.

The conclusions of the entire study on the feasibility of a guided missile exchange with the USSR should consider the priority of intelligence needs on the various aspects of the Soviet guided missile program. These priority needs can then be used in the negotiations with the USSR. This contribution on the field of Soviet production capability considers that intelligence on this subject rates a very high priority and that considerable adjustment may be necessary in the negotiations preceding an exchange in order to guarantee that production facilities are a part of the itinerary.